

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A data storage device based on a magnetic recording medium, comprising:
 - a magnetic head for reading magnetic information recorded on said magnetic recording medium and acquiring a read signal;
 - a data read means for converting said read signal read by said magnetic head into desired data in synchronism with a read clock signal; and
 - a read clock control means for controlling the phase of said read clock signal in accordance with the phase of said read signal read by said magnetic head to correct the phase of said read clock signal if a phase shift between said read clock signal and said read signal exceeds a predefined value.
2. (original) The data storage device according to claim 1, wherein said read clock control means comprises an oscillation means for generating said read clock signal and a correction means for controlling said oscillation means in such a manner as to recognize the phase difference between the read clock signal generated by said oscillation means and said read signal and adjust the phase of the read clock signal for the phase of the read signal.
3. (original) The data storage device according to claim 1, wherein said data read means and said read clock control means are furnished as the functions of a read/write channel.
4. (previously presented) The data storage device according to claim 1, further comprising:
 - a storage means for storing the information about the phase of said read signal; wherein said read clock control means corrects the phase of said read clock signal in accordance with the information about the phase of said read signal, which is stored in said

storage means, if the phase difference between said read signal and said read clock signal is greater than the predefined value.

5. (original) The data storage device according to claim 4, wherein said storage means is a register provided for the read/write channel.

6. (original) The data storage device according to claim 4, wherein said storage means is a memory provided for a hard disk controller.

7. (original) The data storage device according to claim 1, wherein, if data is not successfully read due to a phase difference between said read clock signal and said read signal, said data read means sets a window at a position at which the data has not been successfully read, and wherein the read clock signal whose phase is controlled by said read clock control means is used within the window to read the data again.

8. (original) The data storage device according to claim 1, wherein, if data is not successfully read due to a phase difference between said read clock signal and said read signal, said data read means uses the read clock signal whose phase is controlled by said read clock control means to perform a data read again at a position at which the data has not been successfully read.

9. (previously presented) A correction mechanism for correcting the operation performed in a process for reading data written on a predefined recording medium, the correction mechanism comprising:

a phase detector configured to detect the phase of a read signal which is obtained by reading the information recorded on said recording medium;

an oscillator configured to generate a read control signal which converts said read signal into desired data; and

a phase corrector configured to control said oscillator in accordance with the phase of said read signal, which is detected by said phase detector, in order to correct the phase of the read control signal generated by said oscillator if a phase shift between said read control signal and said read signal exceeds a predefined value.

10. (previously presented) The correction mechanism according to claim 9, wherein said phase corrector compares the phase of said read signal, which is detected by said phase detector, against the phase of said read control signal, which is generated by said oscillator, and shifts the phase of the read control signal until the phase of the read control signal coincides with the phase of the read signal.

11. (previously presented) The correction mechanism according to claim 9, further comprising:

a register for storing the information about the phase of said read signal which is detected by said phase detector;

wherein, if the phase difference between said read signal and said read control signal generated by said oscillator is greater than the predefined value, said phase corrector corrects the phase of the read control signal in accordance with the information about the phase of said read signal which is stored in said register.

12. (original) The correction mechanism according to claim 9, wherein said phase detector, said oscillator, and said phase corrector form a control loop for exercising feedback control over the read control signal during a data read process.

13. (previously presented) A data read control method for reading data written on a predefined recording medium, comprising:

acquiring a read signal of information recorded on said recording medium;
converting said read signal into desired data in synchronism with a read clock signal; and

making corrections, if data is not successfully read due to a phase difference between said read clock signal and said read signal with said phase difference exceeding a predefined value, to adjust the phase of the read clock signal for the phase of the read signal.

14. (previously presented) The data read control method according to claim 13, further comprising setting a window at a position at which said data has not been successfully read, and converting said read signal in the window to data again by using, within the window, said read clock signal whose phase is corrected.

15. (previously presented) The data read control method according to claim 13, wherein converting said read signal to desired data converts, after the phase of said read clock signal is corrected, the read signal at a read failure position to data by using the read clock signal whose phase is corrected.

16. (previously presented) The data storage device according to claim 1, wherein the read clock control means is stable when the phase shift between the read clock signal and the read signal is not greater than the predefined value, making PLL (phase-locked loop) based phase adjustments possible.

17. (previously presented) The data storage device according to claim 1, wherein data is not successfully read by the data read means with the phase shift exceeding the predefined value.

18. (previously presented) The correction mechanism according to claim 9, wherein the oscillator is stable when the phase shift between the read control signal and the read signal is not greater than the predefined value, making PLL (phase-locked loop) based phase adjustments by the phase detector and the oscillator possible.

19. (previously presented) The data storage device according to claim 9, wherein, if the phase difference is not greater than the predefined value, the phase detector and the oscillator are configured to performing PLL (phase-locked loop) based phase adjustments to the phase of the read clock signal to match the phase of the read signal.

20. (previously presented) The data read control method according to claim 13, further comprising, if the phase difference is not greater than the predefined value, performing PLL (phase-locked loop) based phase adjustments to the phase of the read clock signal to match the phase of the read signal.